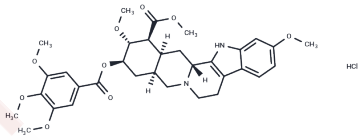
Data Sheet (Cat.No.T21772)

TargetMol

Reserpine hydrochloride

Chemical Properties



CAS No. : 16994-56-2

Formula: C33H41ClN2O9

Molecular Weight: 645.14

Storage: Keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Reserpine hydrochloride is the salt form of Reserpine and acts as an inhibitor of vesicular monoamine transporter 2 (VMAT2). It blocks the uptake of norepinephrine into storage vesicles, leading to the depletion of catecholamines and serotonin at central and peripheral nerve terminals. It has antihypertensive and antipsychotic properties and is commonly used to induce models of gastric ulcer and depression.
Targets(IC50)	Autophagy,Monoamine Transporter,MRP,Potassium Channel
In vitro	In JB6 P+ and HepG2-C8 cells, Reserpine hydrochloride (2.5–10 μM; 7 days) was used to evaluate its regulatory effects on oxidative stress and epigenetic markers. Reserpine hydrochloride upregulated Nrf2, HO-1, and NQO1 protein expression, while downregulating mRNA levels of DNMT1, DNMT3a, and DNMT3b. [1] In clinical isolates of Staphylococcus aureus, Reserpine hydrochloride (20 mg/L) was used to assess its ability to inhibit the NorA efflux pump, reduce the MIC of ciprofloxacin, and enhance its antibacterial efficacy. [1]
In vivo	In rats, Reserpine hydrochloride (0.2 mg/kg; i.p.; once daily for 14 days) was administered to induce a depression-like phenotype. 48 hours after withdrawal, reserpine significantly decreased immobility time and increased climbing behavior in the forced swim test, indicating adaptive changes in monoamine systems. [1] In rats, Reserpine hydrochloride (5 mg/kg; i.p.; single dose) was used to examine neurotransmitter turnover, which significantly increased urinary levels of vanillylmandelic acid (VMA) and 5-hydroxyindoleacetic acid (5-HIAA), indicating enhanced catecholamine and serotonin metabolism. [1] In rats, Reserpine hydrochloride (0.5–15 μg/kg; i.p.; single dose) was tested for its antihypertensive effect, which produced a dose-dependent reduction in blood pressure. [1]

Solubility Information

Solubility	H2O: < 1 mg/mL (insoluble) DMSO: 40 mg/mL (62 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (3.1 mM),Sonication is recommended.

In vivo Formulation	*Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.5501 mL	7.7503 mL	15.5005 mL
5 mM	0.310 mL	1.5501 mL	3.1001 mL
10 mM	0.155 mL	0.775 mL	1.5501 mL
50 mM	0.031 mL	0.155 mL	0.310 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Antkiewicz-Michaluk L, Wąsik A, Możdżeń E, Romańska I, Michaluk J. Withdrawal from repeated administration of a low dose of reserpine induced opposing adaptive changes in the noradrenaline and serotonin system function: a behavioral and neurochemical ex vivo and in vivo studies in the rat. Prog Neuropsychopharmacol Biol Psychiatry. 2015 Mar 3;57:146-54.